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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,900	11/30/2001	Genichi Kakefuda	043753/241148 (5849-20A)	5699
826	7590	02/13/2004	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			KRUSE, DAVID H	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/997,900	KAKEFUDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David H Kruse	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 November 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 and 22-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

**DETAILED ACTION**

1. This Office action is in response to Applicant's reply was received in the Office on 21 November 2003.
2. Claims 15-21 have been cancelled and new claims 22-25 have been entered as requested by Applicant.
3. Those rejections not specifically addressed in this Office action are withdrawn in view of Applicant's amendments.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Objections***

5. Claims 1-3, 6, 7, 10, 13, 14, 22 and 24 are objected to because of the following informalities: The limitation "DNA sequence" should be amended to read -- DNA molecule -- to clearly denote a composition of matter and not information. Claims 4, 5, 8, 9, 11, 12, 23 and 25 are also objected to because they do not obviate the objection to the claims upon which they depend. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. Claims 13, 14, 22 and 23 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant claims a transgenic plant comprising an isolated DNA sequence encoding a small subunit of an *Arabidopsis* AHAS protein, and transgenic progeny therefrom.

Applicant describes an isolated DNA molecule encoding an AHAS small subunit protein isolated from *Arabidopsis thaliana*.

Applicant does not describe isolated DNA molecules encoding an AHAS small subunit protein isolated from other species of *Arabidopsis*.

Hence, it is unclear from the instant specification that Applicant was in possession of the invention as broadly claimed.

See *University of California V. Eli Lilly and Co.*, 43 USPQ2d 1398 (Fed. Cir. 1997), which teaches that the disclosure of a process for obtaining cDNA from a particular organism and the description of the encoded protein fail to provide an adequate written description of the actual cDNA from that organism which would encode the protein from that organism, despite the disclosure of a cDNA encoding that protein from another organism. At 1406, the court states that a description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus.

7. Claims 13, 14, 22 and 23 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for plants transformed with an isolated DNA molecule, that encodes an AHAS small subunit protein isolated from *Arabidopsis*

*thaliana*, having the nucleic acid sequence of SEQ ID NO: 1, or encoding the amino acid sequence of SEQ ID NO: 2, does not reasonably provide enablement for transgenic plants comprising an isolated DNA molecule encoding an AHAS small subunit protein isolated from other species of *Arabidopsis*. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Applicant claims a transgenic plant comprising an isolated DNA sequence encoding a small subunit of an *Arabidopsis* AHAS protein, and transgenic progeny therefrom.

Applicant teaches an isolated DNA molecule encoding an AHAS small subunit protein isolated from *Arabidopsis thaliana*.

Applicant does not teach isolated DNA molecules encoding an AHAS small subunit protein isolated from other species of *Arabidopsis*.

The teachings of Wands can be found in the previous Office action.

Applicant only teaches how to make and use a DNA molecule encoding an AHAS small subunit protein isolated from *Arabidopsis thaliana*. Applicant does not teach how to make and use DNA molecules encoding an AHAS small subunit protein isolated from other species of *Arabidopsis*, a genus of plants of which there are 53 species known in the art, a partial listing including *A. arenosa*, *A. bactriana*, *A. brevicaulis*, *A. bursifolia*, *A. campestris*, *A. cebennensis*, *A. croatica*, *A. dentata*, *A. drassiana*, and *A. erysimoides*. As outlined in the previous Office action, Duggleby, in reference to isolating eukaryotic AHAS small subunit genes by homology, teaches that

ultimately the function of any DNA sequence, whose identity is based solely on homology, can only be proven in experiments designed to evaluate that function (1997, Gene 190:245-249, see page 248, left column, last paragraph). Hence, it would have required undue trial and error experimentation by one of skill in the art at the time of Applicant's invention to make a transgenic plant comprising an isolated DNA molecule encoding an AHAS small subunit protein from all *Arabidopsis* species as broadly claimed.

***Double Patenting***

8. Claims 1-14 remain rejected and new claims 22-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4 and 23 of U.S. Patent No. 6,348,643. This rejection is repeated for the reasons of record put forth in the previous Office action mailed 22 April 2003. Applicant's response states that a terminal disclaimer compliant with 37 CFR 1.130(b) was filed concurrently, but is not of record (page 15 of the response). A telephone conversation with Applicant's representative on 2 February 2004 confirmed that the terminal disclaimer had not been filed. Applicant has subsequently provided the terminal disclaimer to the Examiner on 3 February 2004, but said terminal disclaimer has yet to be approved as of the mailing of this Office action. Hence, this rejection remains of record until such time as the filed terminal disclaimer has been approved.

***Conclusion***

9. This Office action is non-final because new grounds of rejection are herein put forth.
10. No claims are allowed.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (571) 272-0804. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 308-0196.



A handwritten signature in black ink, appearing to read "David Kruse". Below the signature, the initials "AH" and the number "1638" are handwritten.

David H. Kruse, Ph.D.  
4 February 2004